

Danner, Ward

From: Wilson, Patrick
Sent: Friday, April 25, 2014 5:59 PM
To: Jennifer DENICOLA
Cc: BAYLOR, KATHERINE; ARMANN, STEVE
Subject: EPA Update: Sampling & Analysis & Toxicity Equivalence Factors (TEFs)

Good Afternoon Ms. DeNicola (Jennifer),

I hope this message finds you & your family doing well - happy Friday!

I wanted to share some information with you based upon our most recent telephone conversation (Thurs. 24 April 2014).

As we discussed & you know, Katherine Baylor is our sampling & analysis expert. Kathy is prepared to discuss some of the field-level or field-type sampling approaches that we discussed earlier in the week. Kathy is familiar with several PCB field test kits & field methods that have been used to characterize contaminant levels based upon the degree of chlorine content. Kathy can be reached directly at 415.972.3351.

I also wanted to let you know that Kathy has commitments away from the regional office next week (week of 27 April). She may not be in a position to return calls immediately pending her field activities.

The following three weeks both Kathy, Steve & I will be in the process of moving. We are being re-located from our current office into a temporary space. All of our contact information will remain the same, however I share this level of detail with you because all three of us may be difficult to reach directly over the course of our move. Some of us will be working from remote locations while others will be occupying temporary or "swing space". We anticipate being formally located into our new office space no later than the week of 19 May – and all avenues of communication will be fully-functional by that week.

I also wanted to share with you some information regarding TEQ thresholds & health or risk-based screening criteria. As we have discussed, the Agency's toxicity equivalence factors are used to characterize the impacts associated with compounds with dioxin-like activity. In general, this includes dioxin (2,3,7,8-TCDD) and its congeners, furan and its congeners, and the co-planar or dioxin like polychlorinated biphenyls (PCBs).

During past conversations, I have shared with you EPA's guidance document for TEF/TEQ analysis: "Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessment of 2,3,7,8-TCDD & Dioxin-Like Compounds".

EPA has not established risk or health-based TEQ thresholds for any building materials impacted by PCBs, including caulking materials. EPA has proposed TEQ screening criteria for soils impacted by contaminants with dioxin-like activity. The screening threshold for soils under a residential-type exposure scenario is 50 ppt TEQ. The screening threshold for soils under an industrial or commercial-type exposure scenario is 597 ppt TEQ.

Screening thresholds in this context generally indicate that soils contaminated with compounds with dioxin-like activity at concentrations less than these thresholds are typically below our levels of concern from a chronic health-risk perspective.

You also asked about TEQ thresholds for airborne exposures. As an Agency, EPA has not proposed nationwide TEQ thresholds for airborne contaminants with dioxin-like activity. There are several technical reasons for this approach, many of them oriented around the physical chemistry & volatilization characteristics of these large molecular weight, semi-volatile compounds. I would be happy to discuss with you the manner in which a TEQ estimate could be derived from airborne sampling data for compounds with dioxin-like activity. In addition, and consistent with our previous

discussion, airborne PCB congener data for the co-planar PCBs can be directly contrasted with the health or risk-based airborne concentrations found in the Agency's Regional Screening Levels (RSLs) tables. This level of comparison is suitable for providing an order of magnitude estimate of the risk or hazard posed by chronic airborne exposure to these compounds.

Feel free to contact me directly if you would like to further discuss the TEQ derivation & estimate for airborne contaminants with dioxin-like activity.

Best Regards...

..patrick



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